Headphone Testing Assistant

Have you ever spent several hundred bucks on a pair of headphones? Or haven’t you because you could not decide which ones to buy? If the answer is yes, then this might be for you. When making the decision to spend a substantial sum on something that basically does the same as your average Apple ear-buds, but at 10 times the price, one needs to think long and hard before splashing out. This usually involves reading reviews and (god forbid) lurking in forums. A next step is to study the measurements (frequency-, impulse-, square wave responses and distortion). However, most importantly, one should go to a nearby store and directly compare the candidates oneself.

Doing A/B-testing has its very own set of (first world) problems: Constantly switching between two or more headphones, manually picking songs and navigating within them, and worst of all, matching volumes. The latter point is crucial because we humans will, all other things being equal, prefer the headphone that is playing at higher volumes, and thus make biased buying decisions. Volumes can be matched manually, but it is difficult to do accurately, and it becomes a real hassle if one is comparing three or more headphones.

The goal of this thesis is to come up with an approach to make the process of finding the perfect headphone more enjoyable by, among others, solving the problems described above. The idea should then be implemented in Android, such that it becomes a portable all-in-one headphone testing machine (given the headphones can be driven by a phone). If this sounds interesting to you, do not hesitate to contact us so that we can share our ideas with each other!

Requirements: Creativity and an Interest in Android development. Prior experience with Android programming is an advantage. The student(s) should be able to work independently!

Interested? Please contact us for more details!

Contacts

- Pascal Bissig: bissigp@tik.ee.ethz.ch, ETZ G95
- Gino Brunner: brunnegi@student.ethz.ch, ETZ G63